

REMARKS

Claims 1-24 are pending in the present Application. Applicant has amended claims 1, 4, 5, 6, 7, 9, 12, 13, 14, 15, 17, 20, 21, 22, and 23. Applicant has also canceled claims 3, 11, and 19. Applicant has added claims 25-30. Consequently, claims 1-2, 4-10, 12-18, and 20-30 remain pending in the present Application.

Applicant has amended claims 1, 9, and 17 to incorporate most of the limitations of claims 3, 11, and 19, respectively. In particular, Applicant has amended claims 1, 7, 9, 15, 17, and 23 to recite that the subsequent increment is asynchronously formatted in response to occupation of a previous increment reaching a particular threshold. Support for the amendment can be found in the specification, page 7, lines 6-8. Applicant has amended claims 5, 6, 14, 15, 21, and 22 to be independent form. Applicant has amended claims 5, 14, and 21 to correct a minor grammatical error and ensure that all terms have proper antecedent basis. Applicant respectfully submits that these amendments do not narrow the scope of claims 5, 6, 14, 15, 21, and 22. Applicant has also amended claims 6, 15, and 22 to recite that the first increment is formatted when the database file is opened. Support for the amendment can be found in the specification, page 6, lines 16-17. Applicant has also amended claims 4, 12, and 20 to harmonize these claims with the amendments made to claims 1, 9, and 17, respectively. Accordingly, Applicant respectfully submits that no new matter is added.

In the above-identified Office Action, the Examiner rejected claims 1, 2, 5, 6, 9, 10, 13, 14, 17, 18, 21, and 22 under 35 U.S.C. § 102 as being anticipated by U.S. Patent No. 6,172,955 (Hashimoto). The Examiner also rejected claims 3, 4, 7, 8, 11, 12, 15, 16, 19, 20, 23, and 24 under 35 U.S.C. § 103 as being obvious in light of Hashimoto in view of U.S. Patent No. 4,924,330 (Seamons).

In the above-identified Office Action, the Examiner rejected claims 1, 2, 5, 6, 9, 10, 13, 14, 17, 18, 21, and 22 under 35 U.S.C. § 102 as being anticipated by Hashimoto.

Applicant respectfully traverses the Examiner's rejection. Claims 1, 9, and 17 recite a method, computer-readable medium, and system, respectively, which format space on a storage device for a database system. The method, computer-readable medium, and system format a first increment for a database file to be created. The present invention as recited in varying scope in claims 1, 9, and 17 further "asynchronously" format at least one subsequent increment "in response to occupation of a previous increment reaching a threshold."

Thus, claims 1, 9, and 17 recite asynchronously formatting space for a database system. Asynchronous formatting occurs when formatting is not based upon the end of the previous increment being reached. Specification, page 7, lines 5-6. Instead, the space is formatted for a database file in response to a threshold being reached. Thus, in response to a threshold of a previous increment being reached and not based upon the end of the previous increment being reached, a subsequent increment is formatted. As a result, access delays due to formatting subsequent increments can be reduced or eliminated. Specification, page 6, lines 10-11; page 7, lines 10-11; and page 9, lines 1-2. Furthermore, if formatting is performed in the background, normal operation of the database system could continue unabated. Specification, page 7, lines 11-12. As a result, performance of the database system can be improved.

Hashimoto fails to teach or suggest a method, computer-readable medium, or system that asynchronously format an increment for a database system in response to occupation of a previous threshold being reached. Hashimoto does describe a system which formats a magneto-optical disk as a background process. Hashimoto, Abstract. Hashimoto also discloses that the formatting process may be interrupted in order to process various requests. Hashimoto, col. 4,

lines 30-31 and 50-51. Hashimoto also describes restarting the formatting process “after the recording of the user data packet is completed” and after it is determined whether formatting has been completed. Hashimoto, col. 8, lines 48-50 and FIG. 5. Thus, Hashimoto apparently continues formatting, which may include formatting a next packet, only after writing or other processing of a packet is complete. However, Applicant has found no mention in Hashimoto of formatting a particular increment based upon the property of a previous increment. More specifically, Applicant has found no mention in Hashimoto of asynchronously formatting an increment in response to occupation of a previous increment reaching a particular threshold. Consequently, Hashimoto fails to teach or suggest a method, computer-readable medium, or system that asynchronously formats an increment in response to occupation of a previous increment reaching a threshold. Hashimoto, therefore, fails to teach or suggest the method, computer-readable medium and system recited in claims 1, 9, and 17.

Furthermore, Applicant notes that Hashimoto does not relate to database systems. One of ordinary skill in the art will readily recognize that database systems may require a different formatting than is performed for the hard drive (or other disks) of the computer system. Consequently, the formatting of Hashimoto may be inappropriate for a database system. Therefore, to the extent that Hashimoto fails to teach or suggest that the formatting performed is specific to a database system, Hashimoto fails to teach or suggest the method, computer-readable medium, and system in accordance with the present invention.

Moreover, Applicant notes that Hashimoto in view of Seamons also fails to teach or suggest the method, system, and computer-readable medium recited in claims 1, 9, and 17.

Seamons does not remedy the defects of Hashimoto. Seamons teaches formatting a magneto-optical drive. Seamons, Abstract. Seamons describes spreading the formatting process

over time. Seamons, col. 5, lines 20-21. Seamons commences formatting a “predetermined time after the computer is turned on until there is a disk request from an application program.” Seamons, col. 5, lines 30-32. Seamons thus interrupts formatting to service disk requests. The formatting is continued when the computer has been idle for a particular amount of time. Seamons, col. 5, lines 36-44. However, if the application is sufficient “disk-intensive that it uses up all of the formatted areas, . . . the system immediately formats additional space, rather than wait for disk-idle time.” Seamons, col. 5, lines 47-52. Seamons thus **synchronously** formats additional space when all formatted areas are used up. However, Applicant can find no mention of asynchronously formatting a subsequent increment based upon the previous increment reaching a particular threshold. Moreover, Applicant can find no mention in Seamons of formatting that is specific to a database system. Thus, Seamons cannot remedy the defects of Hashimoto.

If the teachings of Seamons are added to those of Hashimoto, the combination might allow the system of Hashimoto to commence formatting at a particular time after the computer is turned on. The combination may also temporarily stop formatting when a disk request is made. The combination might recommence formatting either after a packet has been written or after the computer has been idle for a particular time. The combination might also synchronously format additional space if the formatted spaced is completely used. However, the combination would still fail to asynchronously format a subsequent increment based upon the occupation of a previous increment reaching a threshold. Moreover, the combination would still fail to teach or suggest formatting that is specific to a database system. Consequently, Hashimoto in view of Seamons still fails to teach or suggest the method, computer-readable medium, and system recited in claims 1, 9, and 17. Accordingly, Applicant respectfully submits that claims 1, 9, and 17 are allowable over the cited references.

Claims 2, 10, and 18 depend upon independent claims 1, 9, and 17, respectively.

Consequently, the arguments herein apply with full force to claims 2, 10, and 18. Accordingly, Applicant respectfully submits that claims 2, 10, and 18 are allowable over the cited references.

Claims 2, 10, and 18 are also separately allowable over the cited reference. Claims 2, 10, and 18 recite that the concurrent task is a background process. Stated differently, claims 2, 10, and 18 recite asynchronously formatting a subsequent increment as a background process and in response to the occupation of a previous increment reaching a threshold.

Hashimoto in view of Seamons fail to teach or suggest this feature. As discussed above, Seamons describes synchronously formatting additional space when new, formatted space is unavailable. However, neither Hashimoto nor Seamons describes asynchronous formatting in the background and in response to a threshold being reached. Consequently, any combination of Hashimoto and Seamons fails to teach or suggest asynchronously formatting a subsequent increment as a background process and in response to the occupation of a previous increment reaching a threshold. Hashimoto in view of Seamons, therefore, fails to teach or suggest the method, computer-readable medium and system recited in claims 2, 10, and 18. Accordingly, for the above-identified reasons, Applicant respectfully submits that claims 2, 10, and 18 are allowable over the cited references.

Independent claims 5, 13, and 21 recite a method, computer-readable medium, and system that asynchronously format at least one subsequent increment for the database file as a concurrent task of the database system as a background process when data are first stored in a previous increment. Thus, as data are first stored in an increment, formatting a subsequent is commenced. As a result, access delays can be reduced or eliminated, and if formatting is performed in the

background, normal operation of the database system could continue unabated. Performance of the database system can thus be improved.

Hashimoto and Seamons, separately or in combination, fail to teach or suggest asynchronous formatting of an increment for a database file when data are first stored in a previous increment. As discussed above, both Hashimoto and Seamons teach formatting of an optical disk in the background. The formatting of Hashimoto and Seamons temporarily stops when data is written to the disks. The formatting continues either when writing of a packet is complete (Hashimoto) or when the computer has been idle for a particular time (Seamons). Furthermore, Seamons describes synchronously formatting additional space when all of the formatted space has been used. However, neither Seamons nor Hashimoto describe asynchronously formatting an increment based upon the writing to a previous increment. More specifically, neither Seamons nor Hashimoto describe asynchronously formatting an increment when data are first written to a previous increment. Consequently, any combination of Hashimoto and Seamons would fail to teach or suggest this feature. Hashimoto and Seamons, separately or in combination, thus fail to teach or suggest asynchronously formatting an increment for a database file when data are first written to a previous increment. Consequently, Hashimoto and Seamons, separately or in combination, fail to teach or suggest the method, computer-readable medium, and system recited in claims 5, 13, and 21, respectively.

Moreover, as discussed above with respect to claims 1, 9, and 17, claims 5, 13, and 21 recite formatting for a database file. As discussed above, one of ordinary skill in the art will readily recognize that database systems may require a different formatting than is performed for the hard drive (or other disks) of the computer system. Consequently, the formatting of Hashimoto and Seamons may be inappropriate for a database system. Therefore, to the extent

that Hashimoto and Seamons fail to teach or suggest that the formatting performed is specific to a database system, Hashimoto fails to teach or suggest the method, computer-readable medium, and system in accordance with the present invention. Accordingly, for the above-identified reasons, Applicant respectfully submits that claims 5, 13, and 21 are allowable over the cited references.

Independent claims 6, 14, and 22 recite a method, computer-readable medium, and system that format a first increment for a database system when a database file is opened and that block asynchronously formats the at least one subsequent increment by continuously formatting the at least one subsequent increment for the database as a background process. The method, computer-readable medium and system recited in claims 6, 14, and 22 can thus reduce or eliminate access delays and allow normal operation of the database system to continue. Performance of the database system can thus be improved.

Independent claims 6, 14, and 22 recite a method, computer-readable medium, and system that format a first increment for a database system when a database file is opened and asynchronously and continuously format subsequent increment(s) for the database file. Hashimoto and Seamons, separately or in combination, fail to teach or suggest this feature. Applicant has found no mention in Hashimoto or Seamons of formatting a first increment when a database file is opened, then formatting subsequent increments continuously as a background process. Instead, Seamons times the start of formatting upon the computer being turned on. Any combination of Hashimoto and Seamons, therefore, fails to teach or suggest formatting a first increment when a database file is opened, then formatting subsequent increments continuously. Consequently, Hashimoto in view of Seamons fails to teach or suggest the method, computer-readable medium, and system recited in claims 6, 14, and 22, respectively.

Furthermore, as discussed above, Applicant can find no mention in Seamons or Hashimoto of formatting increments for a database file. Consequently, the formatting of Hashimoto and Seamons may be inappropriate for a database system. Consequently, Hashimoto in view of Seamons fails to teach or suggest the method, computer-readable medium, and system recited in claims 6, 14, and 22, respectively. Accordingly, for the above-identified reasons, Applicant respectfully submits that claims 6, 14, and 22 are allowable over the cited references.

The Examiner also rejected claims 3, 4, 7, 8, 11, 12, 15, 16, 19, 20, 23, and 24 under 35 U.S.C. § 103 as being obvious in light of Hashimoto in view of Seamons.

Claims 4, 12, and 20 depend upon independent claims 1, 9, and 17, respectively. Consequently, the arguments herein apply with full force to claims 1, 9, and 17. Accordingly, Applicant respectfully submits that claims 4, 12, and 20 are allowable over the cited references.

Claims 7, 15, and 24 recite a method, computer-readable medium and system, respectively, which format a first increment for a database file, trigger the database system to asynchronously format subsequent increment(s) in response to occupation of the a previous increment reaching a threshold, and asynchronously format the subsequent increment(s) for the database file as a concurrent task. Thus, claims 7, 15, and 23 are analogous claims 1, 9, and 17.

As discussed above, neither Hashimoto nor Seamons describe asynchronously formatting an increment for a database file in response to the occupation of a previous increment reaching a threshold. For similar reasons, Applicant can find no mention in Hashimoto or Seamons of triggering any type of asynchronous formatting based upon the occupation of a previous increment reaching a threshold. Moreover, as discussed above, neither Hashimoto nor Seamons describe formatting for a database system. Consequently, for similar reasons as discussed above, any combination of Hashimoto and Seamons fails to teach or suggest a method, system, or

computer-readable medium that triggers asynchronous formatting for a database file in response to the occupation of a previous increment reaching a threshold. Hashimoto in view of Seamons, therefore, fail to teach or suggest the method, computer-readable medium, and system recited in claims 7, 15, and 23. Accordingly, Applicant respectfully submits that claims 7, 15, and 23 are allowable over the cited references.

Claims 8, 16, and 24 depend upon claims 7, 15, and 23, respectively. Consequently, the arguments herein apply with full force to claims 8, 16, and 24. Accordingly, Applicant respectfully submits that claims 8, 16, and 24 are allowable over the cited references.

New claims 25, 26, 27, 28, 29 and 30 depend upon independent claims 1, 7, 9, 15, 17, and 23, respectively. Consequently, the arguments herein apply with full force to claims 25, 26, 27, 28, 29 and 30. Accordingly, Applicant respectfully submits that claims 25, 26, 27, 28, 29 and 30 are allowable over the cited references.

Applicant's attorney believes that this application is in condition for allowance. Should any unresolved issues remain, Examiner is invited to call Applicant's attorney at the telephone number indicated below.

Respectfully submitted,

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